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Outsiders and Regional Trade Agreements among Small Countries

The Case of Regional Markets

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Maurice Schiff

Regional trade agreements among small countries may have negative welfare implications for nearby countries excluded from the agreement — but they sometimes benefit from being excluded.



Summary findings

Standard theory says that a country's welfare is unaffected by being excluded from a small regional trade agreement. But for most products "small" countries and regional trade agreements do have some measure of market power. Such market power can arise if

- Supply is geographically concentrated.
- Tastes differ.
- There is product differentiation (such as quality).
- Transport costs are high.
- The principal importing countries impose

quantitative restrictions.

- There is hysteresis because of irreversible costs.

Gupta and Schiff show, based on two case studies, that regional trade agreements among small countries may have negative welfare implications for outside countries. In the first case, they find that Argentina's cattle and beef exports to Peru fell when Peru formed a regional trade agreement (the Andean Pact) with various countries, including Colombia, an exporter of the same products. Argentina also lost because of the higher unit price it received on its exports to Peru. Interestingly, Venezuela's

entry into the Andean Pact (that is, the formation of a larger bloc) seems to have resulted in a welfare gain for the outside country (Argentina).

In the second case, rather than examine whether formation of the Central American Common Market (CACM) had a negative impact on outside countries (for which they lacked data), they examine the impact of the CACM's breakdown on member countries. Although the CACM has essentially been trade-diverting for manufactures, it seems to have been trade-creating for white maize, with both importing and exporting member countries gaining from the regional trade agreement. So, one would expect that a breakdown of the CACM, which resulted in member countries becoming relatively more "outsiders" to the bloc, may have led to a decline in the welfare of both the exporting and importing member countries. This is supported by the data, and implies that if one of the five member countries had been left out of the CACM, it would have been worse off where white maize was concerned.

This paper — a product of the Development Research Group — is part of background work for the group's program on regionalism and development. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Jennifer Ngaine, room N5-060, telephone 202-473-7947, fax 202-522-1159, Internet address trade@worldbank.org. November 1997. (27 pages)

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Outsiders and RTAs among Small Countries:

The Case of Regional Markets

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The views expressed here are those of the authors. They do not necessarily represent those of the World Bank or any of its member governments. The authors are grateful to Alan Winters for comments on an earlier draft.

Foreword

As regional trading arrangements (RTAs) have spread, enlarged and deepened over the last decade, they have posed challenges to economists on both intellectual and policy levels. On the former, do RTAs stimulate growth and investment, facilitate technology transfer, shift comparative advantage towards high value-added activities, provide credibility to reform programs, or induce political stability and cooperation? Or do they, on the other hand, divert trade in inefficient directions and undermine the multilateral trading system?

The answer is probably “all of these things, in different proportions according to the particular circumstances of each RTA.” This then poses the policy challenge of how best to manage RTAs in order to get the best balance of benefits and costs. For example, should technical standards be harmonized and, if so, how; do direct or indirect taxes need to be equalized; how should RTAs manage their international trade policies in an outward-looking fashion?

Addressing these issues is one important focus of the international trade research program of the Development Research Group of the World Bank. It has produced a number of methodological innovations in the traditional area of trade effects of RTAs and tackled four new areas of research: the dynamics of regionalism (e.g., convergence, growth, investment, industrial location and migration), deep integration (standards, tax harmonization), regionalism and the rest of the world (including its effects on the multilateral trading system), and certain political economy dimensions of regionalism (e.g., credibility and the use of RTAs as tools of diplomacy).

In addition to thematic work, the program includes a number of studies of specific regional arrangements, conducted in collaboration with the Regional Vice Presidencies of the Bank. Several EU-Mediterranean Association Agreements have been studied and a joint program with the staff of the Latin American and Caribbean Region entitled “**Making the Most of Mercosur**” is under way. Future work is planned on African and Asian regional integration schemes.

Regionalism and Development findings have been and will, in future, be released in a number of outlets. Recent World Bank Policy Research Working Papers concerning these issues include:

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ABSTRACT

Standard theory says that a country's welfare is unaffected from being excluded from a small regional trade agreement (RTA). However, for most products, "small" countries and RTAs do have some measure of market power. Such market power can arise if -- i) supply is geographically concentrated, ii) tastes differ, iii) there is product differentiation (such as quality), iv) transport costs are high, v) the principal importing countries impose quantitative restrictions, or vi) hysteresis due to irreversible costs.

In this paper we show - based on two case studies - that RIAs among small countries may have negative welfare implications for outside countries. In the first case study, we find that Argentina's cattle and beef exports to Peru fell when Peru formed a RTA (Andean Pact) with Colombia, an exporter of the same products. Argentina also lost due to the higher unit price it received on its exports to Peru. Interestingly, the entry of Venezuela into the Andean Pact (i.e., the formation of a larger bloc) seems to have resulted in a welfare gain for the outside country (Argentina).

In the second case study, rather than examining whether formation of the CACM had a negative impact on outside countries, due to lack of data, we examine the impact of the breakdown of the CACM on member countries. Though the CACM has essentially been trade diverting in the case of manufactures, it seems to have been trade creating in the case of white maize, with both importing and exporting member countries gaining from the RTA. Consequently, one would expect that a breakdown of the CACM, which resulted in member countries becoming more "outsiders" to the bloc, may have led to a decline in the welfare of both the exporting and the importing member countries. This is supported by the data, and implies

that if one of the five member countries had been left out of the CACM, it would have been worse off as far as white maize is concerned.

Outsiders and RTAs among Small Countries:

The Case of Regional Markets

I. INTRODUCTION

If countries forming a regional trade agreement (RTA) are large, and if their external trade barriers remain unchanged following integration, the rest of the world (ROW) will lose due to a worsening in its terms of trade (because the RTA will export less to and import less from the ROW). The question examined here is : What happens to countries left out if the RTA is made up of small countries?

For products for which the RTA as a whole is a price taker, the literature states that the formation of the RTA should have no impact on third countries (ROW). For instance, Winters (1996) shows that if the ROW is large, a RTA has no impact on the terms of trade between the ROW and the RTA, and as long as competition and free trade hold in the ROW, welfare in the ROW is unaffected by the policies of the RTA member countries. On the other hand, under trade barriers in the ROW, changes in ROW imports due to formation of the RTA will have some effect on ROW welfare, but given that the RTA is small relative to the ROW, this effect is likely to be small. We focus here on the effect of formation of a RTA on its terms of trade with the ROW.

Even a small RTA may have market power in certain products. Such market power can arise if -- i) supply is geographically concentrated, ii) tastes differ, iii) there is product

differentiation (such as quality), iv) transport costs are high¹, v) the principal importing countries impose quantitative restrictions, and vi) hysteresis due to irreversible costs.

In this paper we show - based on two case studies - that RIAs among small countries may have negative welfare implications for outside countries. We do not appeal here to product differentiation. Rather, the products in the two case studies are basic commodities with a high degree of homogeneity. The first case study deals with bovine cattle and meat in the Andean Pact, and the second one examines the case of white maize in the Central American Common Market. A theoretical analysis is presented in the appendix.

II. CASE STUDIES

A study to capture the impact of the formation of a RTA requires data on the countries both before and after formation of the bloc. A number of South-South RTAs have not been effectively implemented, while data on many others (e.g. RTAs among African nations) are not available. We did find some data on the Andean Pact and the CACM which seem to provide support for the negative welfare implications for outside countries.

Case A: Impact of Andean Pact formation on Argentinean Bovine Cattle and Meat (Beef) exports

The Cartagena Agreement created the Andean Pact on May 26, 1969 between Bolivia, Chile, Colombia, Ecuador and Peru. Venezuela joined in 1973, and Chile withdrew in 1976 (Bywater, 1990). Its objectives were to harmonize social and economic policies, to accelerate

¹ Amjadi and Winters (1997) show that geographic proximity and low transport costs may not be enough to reap big rewards as a “natural” trading bloc in the case of Mercosur.

development of agriculture, to promote joint industrial program, to reduce bilateral tariffs among trading partners and to have a common external tariff. Andean member countries planned to eventually form a common market. Preferential treatment was extended towards Bolivia and Ecuador (Wallender, 1973).

The intra-Andean trade liberalization process started in 1970 with the removal of tariffs and NTBs on 1975 items on the LAFTA's Common List. The second step was the removal of NTBs on all intra-Andean trade. The third step was to set common and low tariffs on intra-area trade in products subject to progressive liberalization. However, trade flows within the bloc, after an initial boost, stagnated and remained at a low level (Josling, 1996).

Unlike many other RTA's, specific provisions were made to address the agricultural sector (Wong, 1986). A list of agricultural products were selected and the products on this list were subject to national escape clause action. Under the system of national escape clause, an importing country could block imports of agricultural products to the quantities necessary to cover deficits in internal production, but not to reduce the usual consumption of the product or to increase its uneconomic production (Wardlaw, 1973).

At the time of the formation of Andean Pact, trade among member countries accounted for less than 5% of the total trade. Further, trade was heavily concentrated in a few primary products, including cotton, cattle and beef, sugar, cocoa, bananas, and fishmeal (Morawetz, 1974). Beef was one of the products subject to national escape clause (Wardlaw, 1973). We focus here on the exports of bovine cattle and bovine meat (beef) from Argentina.

Among the Andean Pact countries, Peru and Venezuela are importers of bovine cattle and beef, and Colombia is an exporter. Argentina, a neighboring country, is one of the large

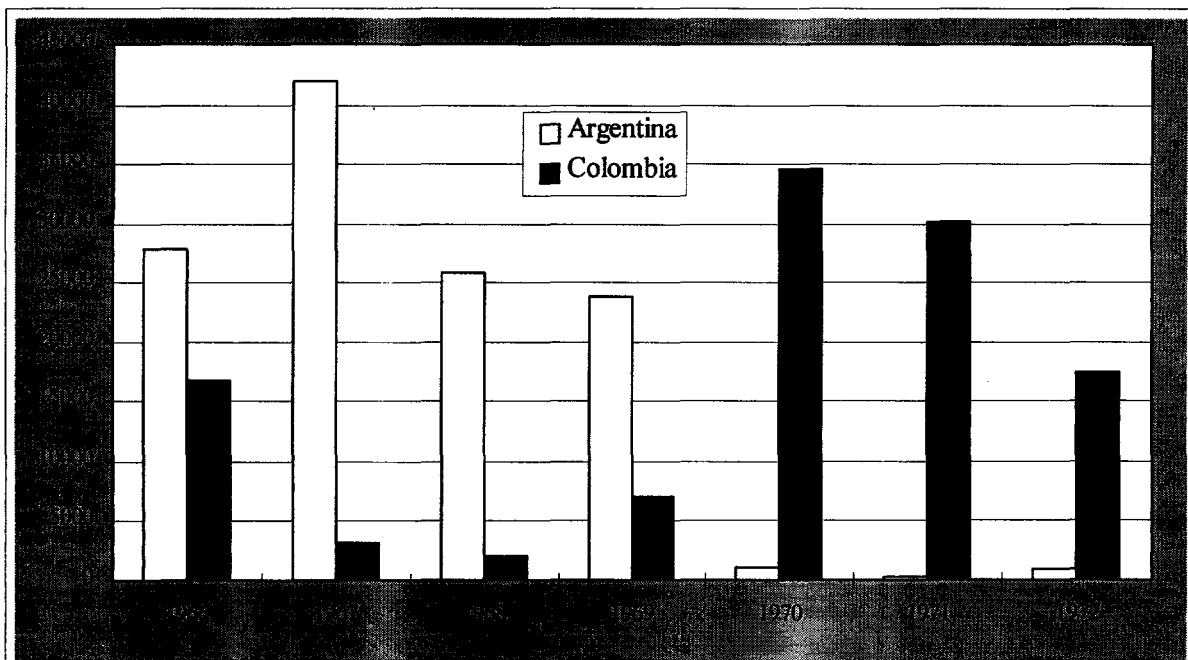
exporters of bovine cattle and beef. There exists a world market for beef, but trade in bovine cattle is restricted to the region due to high transportation costs. Further, the world cattle market is restricted by various forms of non tariff barriers (NTBs).

Bovine Cattle

We compare bovine cattle trade for two periods, 1966-68 (three years prior to the formation of the Andean Pact) and 1970-72 (three years after the formation of the Pact). Peru imported, on average, 40% of its bovine cattle from Argentina and around 22% from Colombia during the first period. Peru was an important market for both Argentina and Colombia.

The formation of the Andean Pact in 1969 would be expected to lead to a shift in Peruvian imports from the outside neighboring country, Argentina, to the member country, Colombia. This is precisely what the data show (Figure 3).

Figure 3: Cattle exports of Argentina and Colombia (MT)



Source: See Table A1

Argentina's exports to Peru fell from 32,000 MT in 1966-68 to less than 1000 MT in 1970-72 and Peru's share in Argentina's exports fell from an average of 30% in 1966-68, to 2% in 1970-72, a decline of over 96% in the trade volume. Colombian exports to Peru, on the other hand, increased from an average of 7 thousand MT to over 27 thousand MT, for the same time period.

Argentina lost 15 mln US\$ a 48% fall in its total trade earnings from bovine cattle exports (with a 96% fall in earnings from its exports to Peru). Colombia, on the other hand, gained 12 mln US\$ for the same period (See Table 1) of which 10.6 mln was in Peru's market.

Table 1: Cattle Exports of Argentina and Colombia (mln US\$)

	Argentina				Colombia			
	World	Peru	Other LAC	ROW	World	Peru	Other LAC	ROW
66-68	31.9	10.4	21.2	0.3	3.05	2.4	0.2	0.5
70-72	16.7	0.4	16.2	0.06	15.8	13.0	0.6	2.2
% change	-48%	-96%	-23%	-79%	417%	444%	302%	328%

Source: See Table A1

In terms of unit export values, Argentina obtained a higher unit value on exports to Peru than on its total cattle exports, though the premium on its exports to Peru fell from 7% to 4% after the formation of the bloc. On the other hand, Colombia unit export value on exports to Peru was lower than on its total exports in 1966-68 (by about 3%) and became higher in 1970-72 (by about 2%).

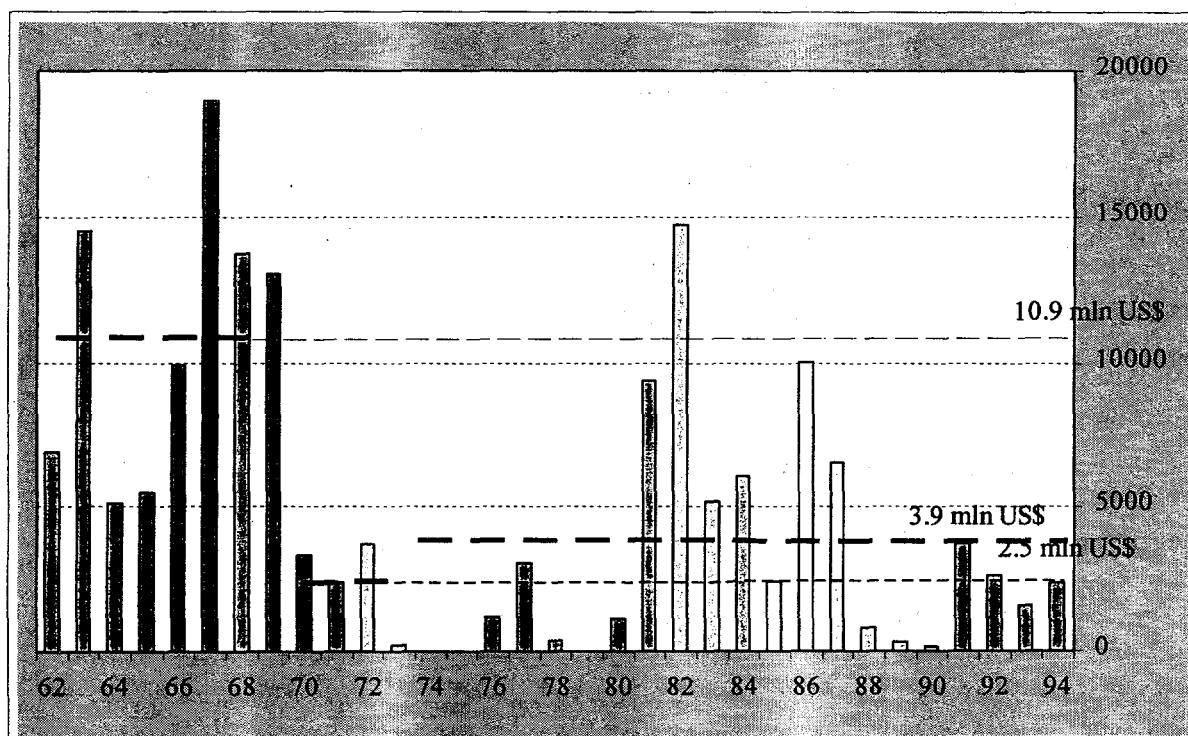
Thus, the excluded neighboring country, Argentina, seems to have lost from the formation of the Andean Pact while Colombia seems to have gained. However, this is an incomplete story because bovine meat or beef is a substitute for bovine cattle, even if an

imperfect one, and unlike cattle, beef is traded on the world market. We examine below what happened to the total trade of cattle and beef.

Bovine Cattle and Beef

Figure 4 presents Argentina's exports of bovine cattle and meat to Peru for the period 1962-94 and Table 2 presents three period averages: 1962-69 (prior to Andean Pact), 1970-73 (prior to Venezuela becoming a member of Andean Pact) and 1974-94. In the first period, 5% of Argentinean exports went to Peru (10.9 mln US\$ worth of exports). The exports declined to 1% (around 2.5 mln US\$ for 1970-73 and 3.9 mln US\$ for the period 1974-94) of the total exports thereafter.

Figure 4: Argentina's Exports to Peru (Mln US\$)



Source: See Table A1

Table 2: Bovine Cattle and Meat Exports (mln US\$)

	Argentina				Colombia			
	WORLD	PERU	Other LAC	ROW	WORLD	PERU	Other LAC	ROW
62-69	231.8	10.9	28.9	202.9	4.9	3.0	1.9	0.0
		5%	12%	88%		62%	38%	0%
70-73	380.9	2.5	43.4	337.6	32.9	13.1	19.8	0.0
		1%	11%	89%		40%	60%	0%
74-94	348.4	3.9	38.5	309.8	30.5	6.2	24.3	0.0
		1%	11%	89%		20%	80%	0%

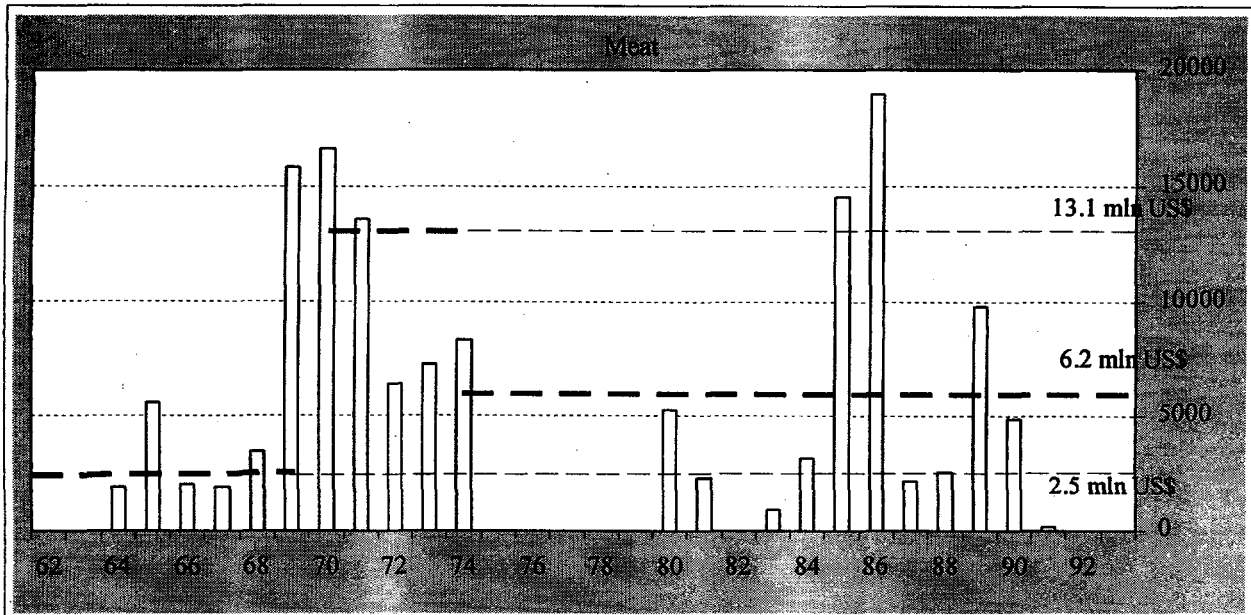
Source: See Table A1

If Peru were a large trading partner for Argentina and the latter were unable to sell in the ROW without a loss in its terms of trade once Peru started importing from a member country, then the bloc formation would be expected to lead to a decline in Argentinean welfare. This occurred in the case of cattle. However, Peru was not an important market for Argentina in the case of beef. Nevertheless, Argentina may have lost somewhat from the formation of the Andean Pact and the fall in the export share going to Peru since it obtained a higher price for its exports in the Peruvian market than in the rest of the world.

Table 2 also indicates that the Colombian annual exports of cattle and beef to Peru increased from less than 3 mln US\$ in 1962-69 to over 13 mln US\$ in 1970-73 (a 447% increase) before falling to 6.2 mln US\$ in 1974-94² (see Figure 5). Peru's share in Colombian exports declined from about 40% to 20%. Why do we observe this decline in Colombian exports to Peru in absolute level and in its share in total exports?

² Note that this is still about double the level in 1962-69, prior to the formation of the Andean Pact. presents Colombia's exports of bovine cattle and meat to Peru.

Figure 5: Colombian Exports to Peru (Mln US\$)



Source: See Table A1

Venezuela, a net importer of bovine cattle and beef, joined the Andean Pact in 1973. It imported mainly from Colombia, though in small quantities prior to 1974. When Venezuela joined the Andean Pact in 1974, it increased its imports from Colombia, and exports from Colombia to Peru declined. As shown in Table 2 and Figure 5, Colombia's annual exports to Peru declined from 13.1 mln US\$ in 1970-73 to 6.2 mln US\$ in 1974-94. Consequently, as shown in Table 2 and Figure 4, Argentina's exports to Peru increased by 55% after 1974.

Standard models of the impact of bloc formation on outsiders show that outsiders lose from the formation of a bloc because it leads member countries to trade more with each other and trade less with the outside world. Thus, the finding that Argentina's volume of exports to Peru increased following the enlargement of the Andean Pact in 1973 (when Venezuela joined) is somewhat surprising.

The Andean Pact before 1973 can be thought of as a single economy which then formed a RTA with Venezuela in 1973. Why was the positive impact on Argentina opposite to the predictions of the standard models? These models typically assume that all member countries have the same initial MFN tariffs and assume zero transportation costs. Relaxing either of the two assumptions can lead to an increase in trade between bloc members and the ROW after bloc formation, and can generate the result we obtained for Argentina³.

Note that Wonnacott and Wonnacott (1994) are able to generate welfare gains from bloc formation under transport costs only if the pattern of trade changes. Below we describe a case of transport costs where bloc formation does not affect the pattern of trade but still results in a welfare gain.

We start with the case of differentiated barriers and abstract from transport costs. Assume two countries denoted Country 1 and Country 2. Assume both are net importers. Country 1 has a high tariff T_1 on imports prior to bloc formation so that its imports are low, while Country 2 has a lower tariff $T_2 < T_1$. Assume now that they form a customs union (CU) and set the common external tariff (CET) at the level $CET = T_2$. Then, imports by Country 2 are not affected but those of Country 1 increase, so that total imports increase following bloc formation. The reason is that formation of the bloc resulted in liberalization of trade with the ROW and thus in higher imports from the ROW. World welfare increases following bloc

³ There are simulation studies on EEC formation which had trade creation effects with rest of the world, for instance Balassa (1974). There are also studies on European integration showing that integration can raise trade with the ROW (The European Economy, 1997). The effects in both studies are due to the associated income effects. We abstract from any income effects below.

formation. Welfare for the bloc as a whole increases if it has no market power⁴, and it increases for the ROW if the bloc has market power.

Prior to 1973, Venezuela did not import cattle or beef from Latin American countries due to restrictive trade barriers. After joining the Andean Pact, Venezuela lowered its barriers to the level of Andean Pact's CET and started importing. In fact, Venezuela imported from Colombia at zero tariff. Nevertheless, it did pay an implicit tariff equal to the CET. Since Colombia exported to both Venezuela and Peru, arbitrage implies that it obtained the same price on its exports to both countries. Peru imported from both Colombia and Argentina, and arbitrage implies it paid the same price to both. Since Peru's imports from Argentina were charged the CET, Venezuela's import price from Colombia included the CET as well.

We now turn to the second explanation. The result, that total imports by member countries increased after bloc formation, can also be obtained by assuming that the members have the same tariffs before bloc formation but with transport costs within one of the member countries.

Assume that the Andean Pact prior to 1973 consists of one economy with two 'regions', Colombia and Peru. Colombia, the exporting region, is located in the North, while Peru, the importing region, is located in the South. Assume that transport costs between Colombia and Peru are $TC = 2$. Both Argentina and Peru are located in the South so assume there are no transport costs between them. Similarly, assume zero transport costs for exports from Colombia to its neighbor Venezuela. The tariff of the Andean Pact and of Venezuela is $T = 3$, and

⁴ With market power, whether bloc welfare rises or falls depends on the level of tariffs relative to the optimum tariffs.

Argentina's export price is $P_a = 10$. Then, Peru's import price (on imports from Argentina) is $P_p = P_a + T = 13$. Since Colombia also sells to Peru, it receives $P_c = P_p - TC = 11$. And since Venezuela pays tariffs on its imports from Colombia, the price in Venezuela is $P_v = P_c + T = 14$.

Argentina does not export directly to Venezuela because that would result in a higher import price for Venezuela, namely $P_a + TC + T = 15$. The price in Venezuela on imports from Colombia is $P_v = P_a + 2T - TC$. Thus, as long as $TC > T/2$, it is cheaper for Peru to import from Colombia and Argentina will not export directly to Venezuela.

Following its entry into the Andean Pact, Venezuela's import price falls to $P_v = P_c = P_a + T - TC = 11$. Thus, its demand for imports increases, Colombia shifts some of its exports from Peru to Venezuela, and Peru shifts some its imports from Colombia to Argentina. In this case as well, total imports by member countries increases following formation of the bloc⁵. What happened is not that trade with the ROW is liberalized following bloc formation, but rather that the import price of Venezuela now includes the tariff only once rather than twice. World welfare also rises in this case, and the welfare of the member countries rises if the ROW (Argentina here) is large relative to the bloc⁶.

⁵ Alternatively, Argentina could ship its beef directly to Venezuela without going through Peru and Colombia. Say the transport cost is TC_{AV} . The price in Venezuela from buying directly from Argentina would be $P_a + TC_{AV} + T$. As long as $TC_{AV} > T - TC$, Venezuela will import from Colombia, and will increase its imports after joining the Andean Pact. If $TC_{AV} < T - TC$, then Venezuela would initially import from Argentina, but would shift to Colombian imports after joining the Andean Pact (because $TC_{AV} > -TC$) and would increase its imports as well.

⁶ Venezuela gains from the price reduction. If Argentina is large, the bloc's import price remains unchanged and the bloc as a whole gains. However, if Argentina is small, the bloc's import price rises after entry of Venezuela, and the impact on bloc welfare is ambiguous.

A variant of the bloc formation and internal transport cost story is provided in Srinivasan (1994) where both the Northern and the Southern countries join the bloc. He also simulates the impact of an exporter, Bangladesh, forming a bloc with India and replacing sales from Western to Eastern India.

Case B: The Impact of the Breakdown of CACM on the Trade of White Maize

Economic integration initiatives in Central America started in the fifties with the conclusion of several bilateral free-trade treaties. The Central American Common Market (CACM) was officially created in 1960 among five countries: Costa Rica, Guatemala, El Salvador, Honduras and Nicaragua. The main goals of the CACM were to establish a CET to protect the region's industry; to remove any intra-trade barriers; and to promote extraregional exports to make the regional economy a player in the world economy. Preferential treatment was to be extended to the relatively underdeveloped countries within the CACM. CACM was, however, only a limited customs union since intraregional trade was restricted and countries did not adhere to the CET. Basic agricultural commodities were virtually excluded from the liberalization of trade.

As discussed by Lachler et al. (1990), the formation of the bloc, nevertheless, had a considerable impact on intraregional trade which increased from less than 5% of total trade to over 20% after formation of the bloc. Though intraregional trade in manufactures saw a rapid growth in the sixties, the products were not competitive on the world market and CACM was unable to meet its objective of expanding extraregional trade. Further, no preferential treatment

was extended to the less developed economies of the region due to protectionist policies of the member countries. The external debt crisis and trade imbalance among member countries of the region in the late 70s led to restrictive trade policies. Total imports declined and intraregional trade saw an even greater decline⁷.

The data on CACM countries start in 1963, leaving us no observations prior to the formation of the bloc. We will, thus, concentrate on the impact of the breakdown of CACM on intraregional trade in white maize. The breakdown -- due to increased trade and other barriers -- means that member countries found themselves more “outside” the bloc than before.

White maize is a product with a localized market. Over 35% of total world production of white maize is produced and consumed in the region (Latin American and Caribbean (LAC) countries) and is not connected to the other “local” or regional white maize markets (e.g. Southern Africa). Thus, one can reasonably assume that these CACM countries had some market power in the trade of white maize.

There are three problems in analyzing the impact of the CACM breakup on the trade of white maize. First, data on white maize are nonexistent since most of the data sources report white and yellow maize together. Since imports from the US and countries outside the LAC are essentially yellow maize, we assume that white maize imports consist exclusively of intraregional imports and imports from Mexico and Panama.

Second, data on the intraregional trade in maize are not very reliable since regional trade was often not registered. Registration occurred not for statistical purposes but rather to prevent smuggling, and anecdotal evidence suggests that little registration took place when there were no

⁷ See Lachler et al. (1990) for further details of the impact of CACM on manufactures.

controls, while smuggling occurred when there were controls on intraregional trade. Thus data are likely to under-report the actual transactions.

Third, converting local currency prices to dollar prices using official exchange rates may not give us a precise picture of relative intraregional prices at times when bilateral exchange rates were used. Variable inflation across member countries in the 1980s and balance of payment pressures resulted in differential devaluations across member countries and in sharp instability in nominal and real bilateral exchange rates (Lizano, 1993).

This led to a further breakdown in intraregional trade. It is the impact of this breakdown in intraregional trade which we aim to examine in the case of white maize where member countries are likely to have some market power.

Guatemala is the largest producer of white maize within the CACM countries, followed by El Salvador and Honduras. Guatemala is also a large consumer of the product and thus a net importer of maize (both white and yellow). Honduras was the only net exporter within CACM, and only in the sixties.

Table 3 presents four period averages of CACM imports of unmilled maize (both yellow and white) from CACM, and the USA. For the period 1963-72, intraregional imports accounted for 87% of the imports of white maize, and increased to 97% in 1973-84. However, imports of white maize declined in absolute amount and also as a ratio of total imports of maize due to increased imports of yellow maize mostly from the US. CACM imports of white maize declined from 81% in 1963-72 to 5.2% in 1973-78 and those of yellow maize increased from less than 20% to 95%.

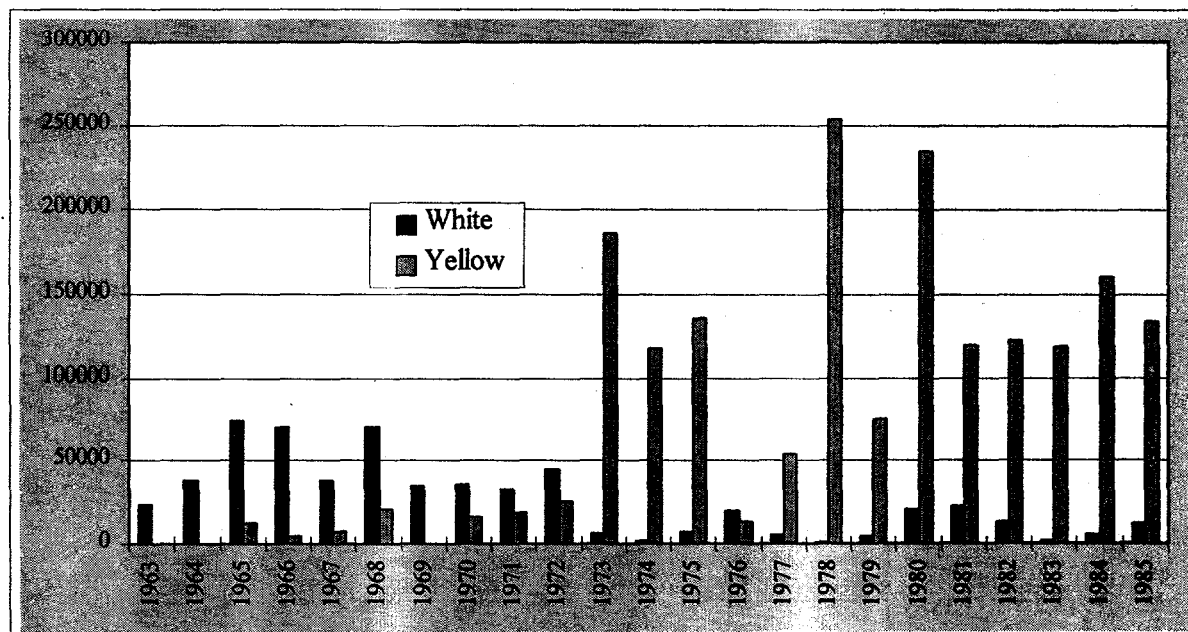
Table 3: CACM imports of unmilled maize

Year	White Maize				Yellow Maize		
	Intraregional		All White		USA	All Yellow	
	'000 MT	% imports of white	'000 MT	% of total imports	'000 MT	'000 MT	% of total imports
1963-72	40.1	87.0	46.3	81.2	9.8	10.7	18.8
1973-78	6.8	97.0	7.0	5.2	124.1	126.8	94.8
1979-84	11.3	97.0	11.6	7.7	129.1	138.4	92.3

Source: See Table A2

Yellow maize is used mostly for feed and white maize is used mainly for human consumption (especially for "tortilla") in the CACM countries. The crisis which started in the seventies and became full blown by the early eighties led to a shift in imports of the CACM countries from white maize to yellow maize (see Figure 6).

Figure 6: CACM Imports (in MT) of white and yellow maize



Source: See Table A2

The change in the relative consumption of white and yellow maize due to the breakdown in intraregional trade in CACM must have had a negative impact on the member countries' welfare since yellow maize is considered a poor substitute for white maize in these countries.

Among the five CACM countries, Costa Rica is the main importer of maize. It imported from member countries El Salvador, Nicaragua and Honduras (See Table 4). About 50% of the total imports of Costa Rica prior to 1973 were from member countries (with over 60% of those from Nicaragua). In the crisis period, from the late 1970s to the early eighties, El Salvador became the main supplier of white maize to Costa Rica. However, the imports from member countries fell to less than 9% and those from the US increased to 91% for the period 1979-84.

Table 4: Costa Rica's Imports of Unmilled Maize (in MT)

	WORLD	CACM	NICARAGUA	EL SALVADOR	HONDURAS	USA
1963-72	12572	6191 (49%)	3767	1434	943	3533 (28%)
1973-78	17329	1931 (11%)	1145	462	310	13184 (76%)
1979-84	32601	2810 (8.6%)	594	1383	833	29776 (91%)

Source: See Table A3

Note: Percent in imports from the world are given in parenthesis

As shown in Table 5, the deflated import price of white maize for Costa Rica (P^w_{cri}) relative to the deflated unit import price of yellow maize (P^y_{cri}) increased from an average of 0.75 in 1965-72 to 2.22 in 1973-78 and remained above one for all years after 1979 (See Table A4). Thus, in the late 1970s, imports of white maize in Costa Rica had become more costly than importing yellow maize from the US. This would seem to suggest that Costa Rica's welfare fell.

Table 5: Import and Producer prices (in US\$/MT)

	PW_{cri}	PY_{cri}	PW_{cri}/PY_{cri}	PP_{slv}	PP_{slv}/PW_{cri}	PP_{slv}/PY_{cri}
1965-72	87.7	117.0	0.75	78.8	0.89	0.67
1973-78	365.2	163.7	2.22	139.0	0.38	0.85
1979-84	292.1	179.8	1.63	186.2	0.64	1.04

Source: See Table A4.

The main exporting member country, El Salvador, was also adversely affected. Producer prices in El Salvador (PP_{slv}) increased over time, but the increase was relatively lower than that of the import price of white maize in Costa Rica. As expected the breakdown in the CACM resulted in a fall in the price of white maize in the exporting countries relative to that in the importing countries. The relative producer price of El Salvador to import price of white maize of Costa Rica decreased from 0.89 in 1965-72 to 0.38 in 1973-78 and to 0.64 in 1979-84. Thus, the breakdown of the CACM --which resulted in each member country being left more “outside” the other CACM member countries -- seem to have had a negative impact on both importers and exporters within the bloc.

III. CONCLUSION

Standard theory says that a country’s welfare is unaffected from being excluded from a small RTA. However, for most products, “small” countries and RTAs do have some measure of market power. Regional markets are pervasive whether due to localized production and/or high transport costs, taste and quality differences resulting in imperfect or low substitution, irreversibility and high adjustment costs in changing markets, and more. These occur both at the

domestic level (e.g. imagine the losses for a village in Africa suddenly locked out from selling to or buying from a nearby market) and at the international level. This was illustrated with two case studies: Bovine cattle and beef trade in the Andean Pact region, and white maize in CACM.

In the first case, we find that Argentina's cattle exports to Peru fall when Peru formed a RTA with Colombia, an exporter of the same product. When we consider exports of cattle plus beef, Argentina also lost market share to Colombia in Peru's market, though the percentage loss is not as pronounced. Though the percentage loss is smaller in volume terms in the latter case, Argentina seems also to have lost from the lower exports to Peru because it obtained a higher price in Peru than in other export markets. Interestingly, the entry of Venezuela into the Andean Pact (i.e., the formation of a new, larger bloc) seems to have resulted in a welfare gain for the outside country (Argentina).

In the second case, we find that a breakdown of an existing bloc, CACM, which results in member countries becoming more "outsiders" to the bloc, may lead to a decline in the welfare of both the exporting and the importing member countries.

Appendix

Consider three neighboring countries, 1, 2 and 3. Country 2 and Country 3 export commodity X to Country 1 and to the rest of the world (ROW). Assume no transport costs between the three neighboring countries and the ROW. Further, assume, Countries 1 and 2 initially have the same MFN import tariff T , and now form a RTA. Then demand for exports from the outside country, Country 3, by the RTA falls because Country 1 shifts from importing X from Country 3 to importing X from Country 2. Similarly, supply of exports of the commodities by the RTA to Country 3 falls as well.

Case 1: If Country 3 is small in the market for its exports (and imports), it will simply reallocate its trade to the non-RTA (ROW) market, and will not be affected in terms of its volume and/or price of exports (or imports)⁸.

Case 2: Assume, on the other hand, that the market for Country 3's exports is regional (or local) - i.e. it is concentrated geographically to Countries 1, 2 and 3 (and/or a few other neighboring

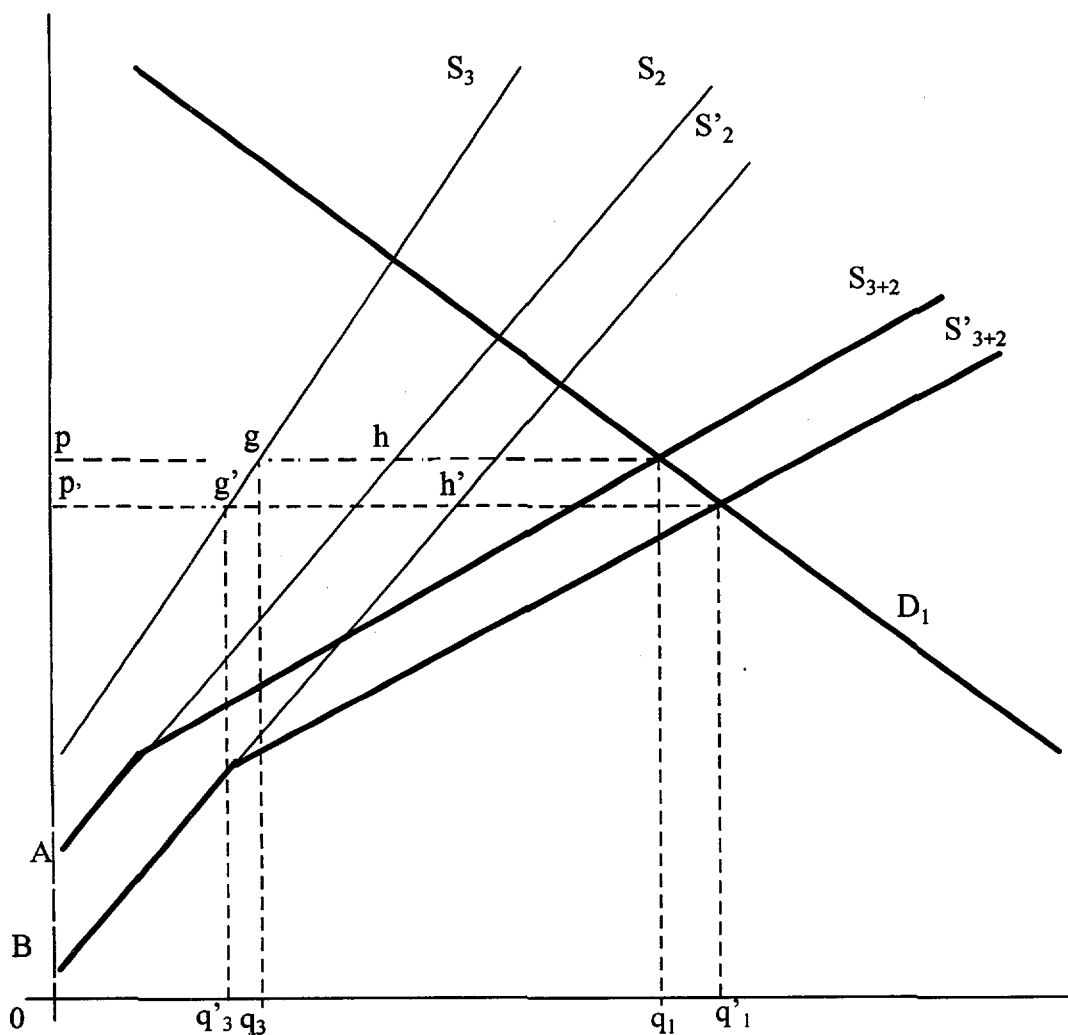
⁸ Note that the price at which Country 1 imports after the formation of the RTA depends on the shift in the export supply curve of Country 2, S_2 . If the shift in S_2 is such that Country 1 continues to import from Country 3 and the ROW after formation of the RTA, the price in Country 1 remains $P_w + T$ (where P_w is the world price and T is its MFN tariff), and Country 2 receives now a price $P_w + T$ for its exports to Country 1 rather than P_w . If, after formation of the RTA, S_2 shifts out to the point where the sum, $S_2 + S_3$, of the exports of Country 2 and Country 3 at price $P_w + T$ is larger than import demand by Country 1, the price will still remain at $P_w + T$ because Country 3 -- which continues to pay tariff T on exports to the RTA -- will export any excess to the ROW at price P_w . However, if after the formation of the RTA, S_2 shifts out to a point beyond the excess demand of Country 1 at price $P_w + T$, then Country 1 will no longer import from Country 3 and the ROW and the price in Country 1 will fall. Thus, the formation of a RTA alters the terms of trade only if the pattern of trade between Country 1 and Country 3 changes.

Wonnacott and Wonnacott (1994) examine a simpler case of two small countries and the ROW in a general equilibrium framework, and also find that a RTA between the two small countries affects the terms of trade only if the pattern of trade with the ROW changes.

countries). Then, Country 3 may lose from formation of the RTA between Countries 1 and 2, both in terms of volume of exports and unit value (and similarly for imports).

Figure 1 depicts this case. The import demand for commodity X by Country 1 is given by D_1 . The export supply, inclusive of tariffs, is from two sources - Country 2 (S_2), and Country 3 (S_3), with a total supply S_{2+3} . The demand of Country 1 is $0q_1$ with $0q_3$ supplied by Country 3 and the rest by Country 2. The domestic price in country 1 is p and the export price in Countries 2 and 3 is $p-T$ (not shown in the figure).

Figure 1



After the formation of the RTA, the supply curve of Country 2 shifts out to S'_2 and S_{3+2} shifts out to S_{3+2}' . The quantity demanded by Country 1 increases to $0q'_1$. Imports from Country 3 fall from $0q_3$ to $0q'_3$ and imports from Country 2 increase from q_3q_1 to $q'_3q'_1$.

More importantly, Country 3 loses because its volume of exports decline from $0q_3$ to $0q'_3$ and its export price falls from $p-T$ to $p'-T$, with its producer surplus falling from Ap_g to Ap'_g . Country 2 gains because of an increase in the volume of exports as well as an increase in its export price from $p-T$ to p' , with its producer surplus increasing from Aph to $Bp'h$. In this case, the country left out of the RTA, Country 3, loses.

Case 3: The above cases abstract from transportation costs. Introducing transportation costs with the ROW drives a wedge between the price of imports from the ROW and the price of exports to the ROW for the three countries. This is shown in Figure 2.

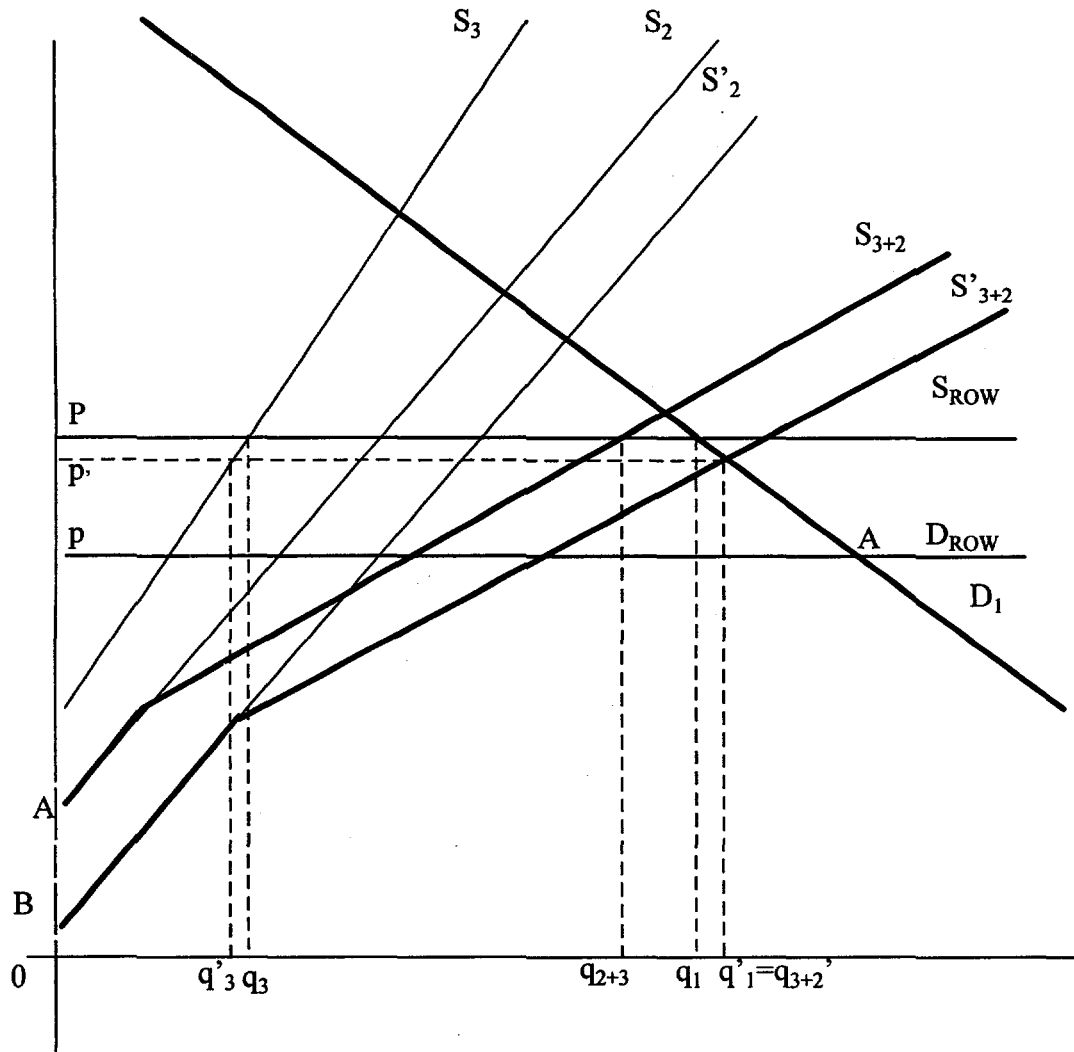
Country 1 can import from the ROW at price P . Country 2 and Country 3 can export to the ROW at price p ($< P$), and can export to Country 1 at any price smaller or equal to P . The world price is $P_{ROW} = (P + p)/2$; with transport cost $= (P - p)/2$ between the ROW and the region (Countries 1, 2, and 3).

Assuming that prior to the formation of the RTA, Country 1 imports $0q_1$ at price P , and with $0q_3$ imported from Country 3, $q_{2+3}q_3$ imported from Country 2 and $q_{2+3}q_1$ imported from the ROW.

After the formation of the RTA, the supply curve of Country 2 shifts out to S'_2 . If supply $S'_{3+2} < 0q_1$ at price P , then there is no impact on the import price, on Country 3's volume of exports or on its welfare (Country 1 simply reduces imports from the ROW in the same amount as it increases imports from Country 2). This is just like Case 1.

However, if $S'_{3+2} > 0q_1$ at price P , then the quantity demanded by Country 1 increases to $0'q_1$, imports from Country 3 fall from $0q_3$ to $0'q_3$ and imports from Country 2 rise from q_3q_1 to $q'_3q'_1$, with the price $p' < P$.

Figure 2



As in case 2, Country 3 loses while Country 2 gains, i.e., the country left out of the RTA loses. Note that in this case, the countries in the region stop trading with the ROW (if S'_{3+2} intersects D_1 to the right of point A). Country 3 loses even more if S'_2 increases by so much that

the region becomes an exporter to the ROW. Thus, in order for Country 3 to lose from a RTA between Country 1 and Country 2, the pattern of trade with the ROW must change. In other words, the ROW must change from being an exporter to the bloc, to either not trading with the bloc or importing from it. Note however that in the case of differentiated products, Country 3 can lose even if the pattern of trade is not affected.

We believe that the phenomenon of local or regional markets -- due to product specificity, differentiated products (lower quality), quantitative restrictions and/or transportation costs on trade with the ROW -- is quite prevalent. This is also prevalent for trade within individual countries, especially in the developing world, where high domestic transport costs and quantitative restrictions often generate local market power. However, despite the presumed prevalence of such phenomena, hard evidence is very difficult to come by, particularly given our focus on developing countries.

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